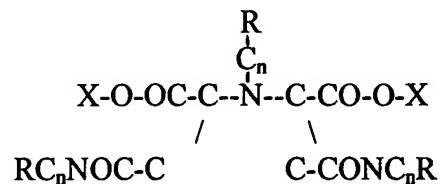
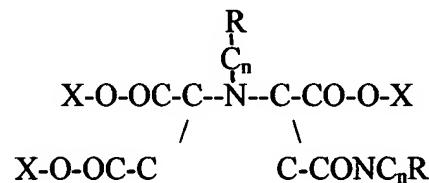


2. (Amended) A chelating composition in combination with fertilizer or fertilizer additives, said chelating composition comprising a modified iminodisuccinic acid, or a salt thereof, having one or more of the following formulas:

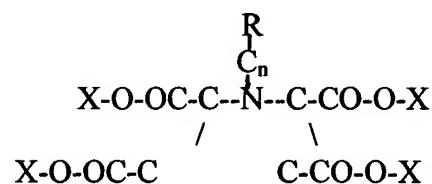
(a)



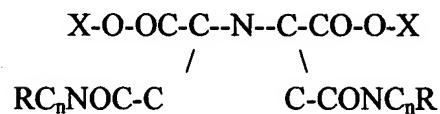
(b)



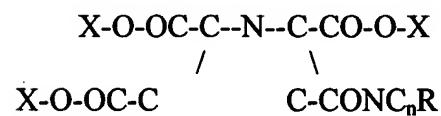
(c)



(d)



(e)



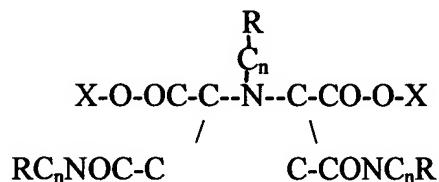
where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal;

where n may be 1 to 10; and

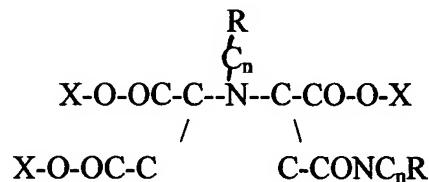
where R may be a Lewis base capable of donating a nonbonded pair of electrons.

3. (Amended) A fertilizer comprising a chelating composition for application to soils, seeds or plants, said chelating composition comprising a modified iminodisuccinic acid, or a salt thereof, having one or more of the following formulas:

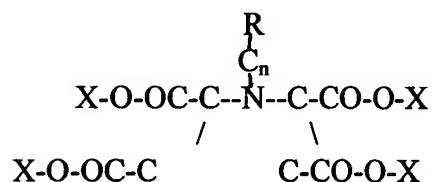
(a)



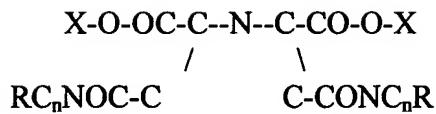
(b)



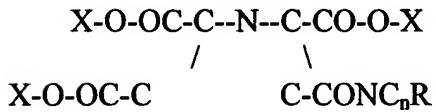
(c)



(d)



(e)



where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal;

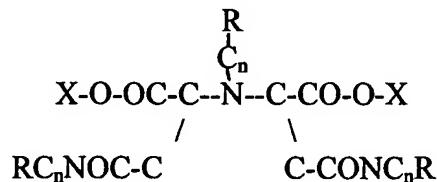
where n may be 1 to 10; and

where R may be a Lewis base capable of donating a nonbonded pair of electrons.

4. The fertilizer of claim 3 wherein said fertilizer is a non-phosphate fertilizer.

5. The fertilizer of claim 3 wherein said fertilizer is a phosphorus containing fertilizer.

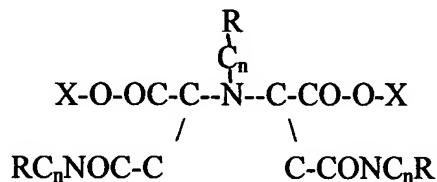
12. (Amended) A compound used as a fertilizer additive comprising at least one poly functional substitution on iminodisuccinic acid having the following formula;



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons, wherein said compound is synthesized by a synthesis comprising the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and
- (b) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N-polyfunctional acid common name amide.

13. (Amended) A compound used as a chelating agent in a concentration of  $1/10^a$  to 1 part, where a is less than 10, or  $1.0 \times 10^{-9}$  Molar to 3Molar, wherein said compound comprises at least one poly functional substitution on iminodisuccinic acid having the following formula;

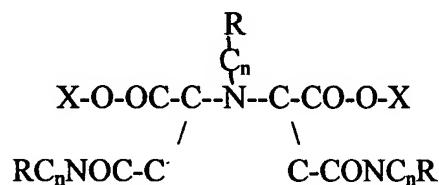


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons, and wherein said compound is synthesized by a synthesis comprising the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and

(b) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N- polyfunctional acid common name amide.

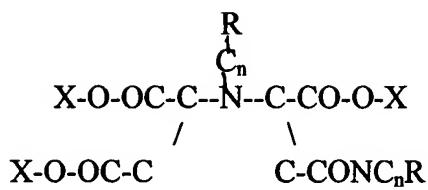
14. (Amended) A compound used for application to soils, seed, or plants, wherein said compound comprises at least one poly functional substitution on iminodisuccinic acid having the following formula;



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons, and wherein said compound is synthesized by a synthesis comprising the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and
- (b) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N- polyfunctional acid common name amide.

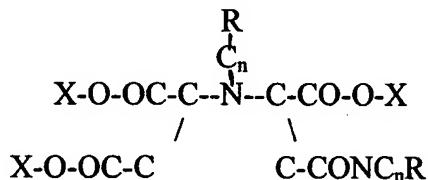
16. (Amended) A compound used as a fertilizer additive comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is 1 to 10, R is a lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, and wherein the synthesis of said compound comprises the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and
- (b) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compound.

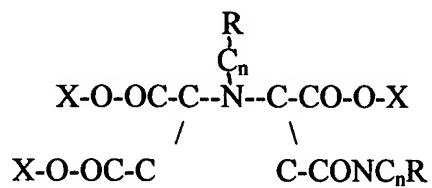
17. (Amended) A compound used as a chelating agent in a concentration of  $1/10^a$  to 1 part, where  $a$  is less than 10, or  $1.0 \times 10^9$  Molar to 3Molar, said compound comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is 1 to 10, R is a lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, wherein the synthesis of said compound comprises the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and
- (b) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compound.

18. (Amended) A compound used for application to soils, seed, or plants, said compound comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

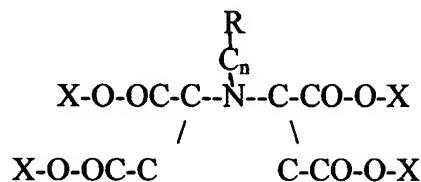


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is 1 to 10, R is a lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, wherein the synthesis of said compound comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and

(b) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compound.

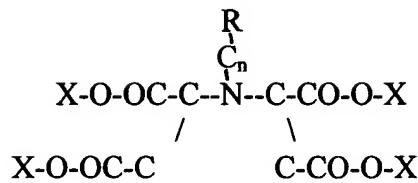
20. (Amended) A fertilizer additive comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of electrons, wherein the synthesis of said fertilizer additive comprises the steps of :

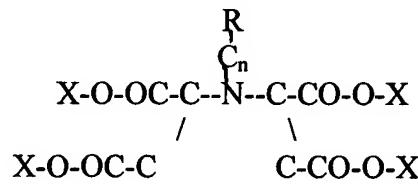
adding maleic anhydride or malic acid to Me (OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinamino(:functional group).

21. (Amended) A chelating agent in a concentration[s] of  $1/10^a$  to 1 part, where a is less than 10, or, or  $1.0 \times 10^{-9}$  Molar to 3Molar, wherein said chelating agent comprises at least one poly functional substitution on iminodisuccinic acid having the following formula:



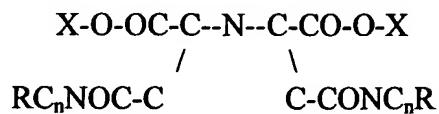
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of electrons, and wherein the synthesis of said chelating agent comprises the steps of : adding maleic anhydride or malic acid to Me (OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinamino(:functional group).

22. (Amended) A compound used for application to soils, seed, or plants comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of electrons, wherein the synthesis of said compound comprises the steps of: adding maleic anhydride or malic acid to Me (OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinamino(:functional group).

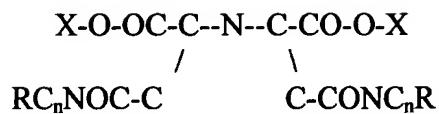
24. (Amended) A fertilizer additive comprising at least one poly functional substitution on iminodisuccinic acid having the following formula;



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said fertilizer additive comprises the steps of:

- (a) adding acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide; and
- (b) adding to said N- polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide.

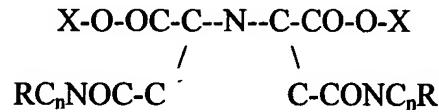
25. (Amended) A chelating agent in a concentration of  $1/10^a$  to 1 part, where a is less than 10, or  $1.0 \times 10^{-9}$  Molar to 3 Molar, said chelating agent comprising at least one poly functional substitution on iminodisuccinic acid having the following formula;



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; and wherein the synthesis of said chelating agent comprises the steps of :

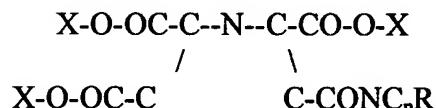
(a) adding acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide; and (b) adding to said N- polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide.

26. (Amended) A compound used for application to soils, seed, or plants comprising at least one poly functional substitution on iminodisuccinic acid having the following formula;



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; and wherein the synthesis of said compound comprises the steps of : (a) adding acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide; and (b) adding to said N- polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide.

28. (Amended) A fertilizer additive comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

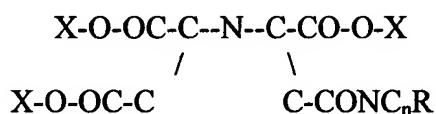


where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said fertilizer additive comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;

(b) adding to said N- polyfunctional acid common name amide, water, ammonia + maleic anhydride or maleic acid (salt) and allowing same to react to form said fertilizer additive.

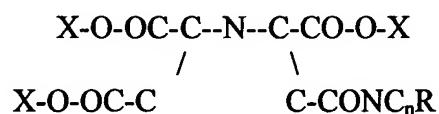
29. (Amended) A chelating agent in a concentration of  $1/10^a$  to 1 part, where a is less than 10, or  $1.0 \times 10^9$  Molar to 3 Molar, said chelating agent comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said chelating agent comprises the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;
- (b) adding to said N- polyfunctional acid common name amide, water, ammonia + maleic anhydride or maleic acid (salt) and allowing same to react to form said chelating agent.

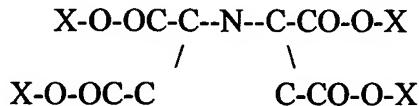
30. (Amended) A compound used for application to soils, seed, or plants, said compound comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said compound comprises the steps of:

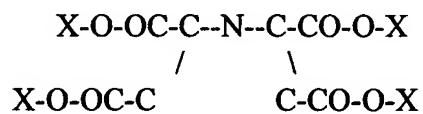
- (a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;
- (b) adding to said N- polyfunctional acid common name amide, water, ammonia + maleic anhydride or maleic acid (salt) and allowing same to react to form said compound.

32. (Amended) A fertilizer additive comprising iminodisuccinic acid having the following formula



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salt.

34. (Amended) An iminodisuccinic acid used for application to soils, seed, or plants having the following formula



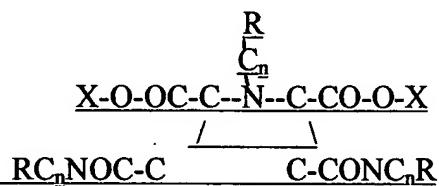
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salt.

35. Nonphosphate fertilizer additives comprising Iminodisuccinates.

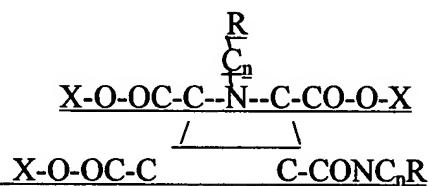
**MARKED-UP VERSION SHOWING CHANGES**

2. (Amended) A [The] chelating composition [of claim 1] in combination with fertilizer or fertilizer additives, said chelating composition comprising a modified iminodisuccinic acid, or a salt thereof, having one or more of the following formulas:

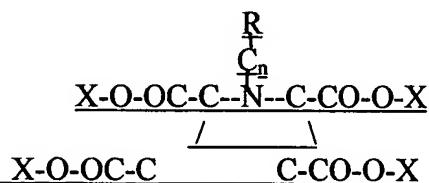
\_\_\_\_ (a)



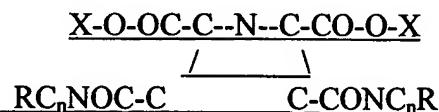
\_\_\_\_ (b)



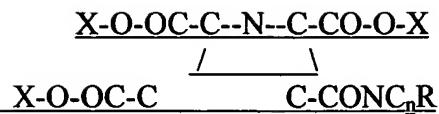
\_\_\_\_ (c)



\_\_\_\_ (d)



(e)



where X may be H, alkali, alkaline earth, ammonium-substituted radical.

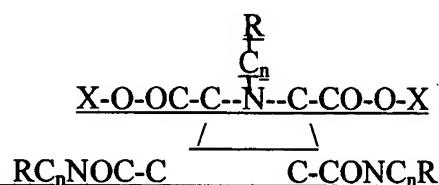
ammonium or transition metal;

where n may be 1 to 10; and

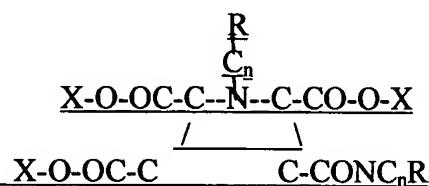
where R may be a Lewis base capable of donating a nonbonded pair of electrons.

3. (Amended) A fertilizer comprising a [the] chelating composition [of claim 1] for application to soils, seeds or plants, said chelating composition comprising a modified iminodisuccinic acid, or a salt thereof, having one or more of the following formulas:

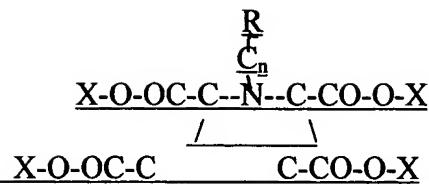
(a)



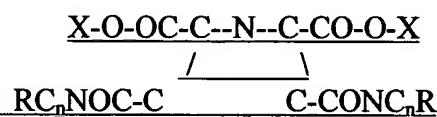
(b)



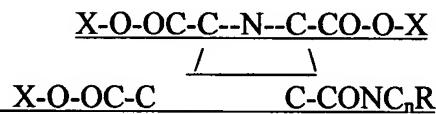
\_\_\_\_\_ (c)



\_\_\_\_\_ (d)



\_\_\_\_\_ (e)

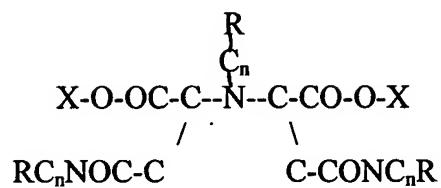


where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal;

where n may be 1 to 10; and

where R may be a Lewis base capable of donating a nonbonded pair of electrons.

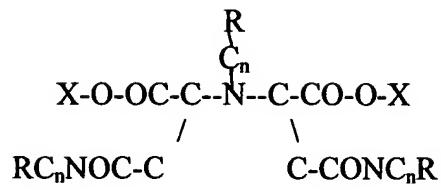
12. (Amended) [The] A compound[s] [synthesized in claim 11] used as a fertilizer additive[s] comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons,  
wherein said compound is synthesized by a synthesis comprising the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and
- (b) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N-polyfunctional acid common name amide.

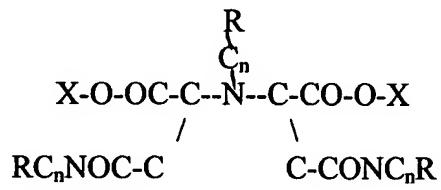
13. (Amended) [The] A compound[s] [synthesized in claim 11] used as a chelating agent[s] in a concentration[s] of  $1/10^a$  to 1 part, where a is less than 10, or  $1.0 \times 10^9$  Molar to 3Molar, wherein said compound comprises at least one poly functional substitution on iminodisuccinic acid having the following formula;



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons, and wherein said compound is synthesized by a synthesis comprising the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and
- (b) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N- polyfunctional acid common name amide.

14. (Amended) [The] A compound[s] [in claim 11] used for application to soils, seed, or plants, wherein said compound comprises at least one poly functional substitution on iminodisuccinic acid having the following formula;

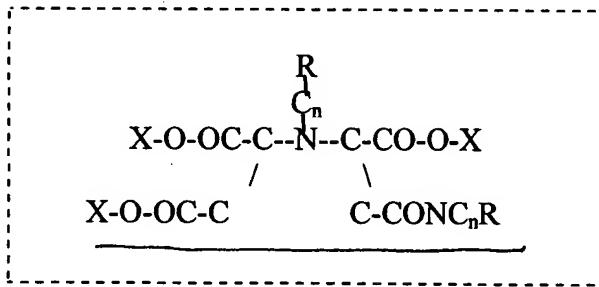


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons, and wherein said compound is synthesized by a synthesis comprising the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and

(c) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N- polyfunctional acid common name amide.

16. (Amended) [The] A compound[s] [synthesized in claim 15] used as a fertilizer additive[s] comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

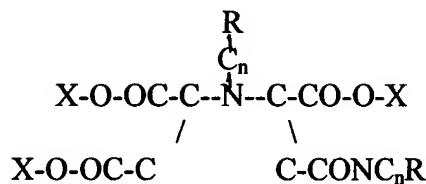


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is 1 to 10, R is a lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, and wherein the synthesis of said compound comprises the steps of:

(c) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and

(b) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compound.

17. (Amended) [The] A compound[s] [synthesized in claim 15] used as a chelating agent[s] in a concentration[s] of  $1/10^a$  to 1 part, where  $a$  is less than 10, or  $1.0 \times 10^9$  Molar to 3 Molar, said compound comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

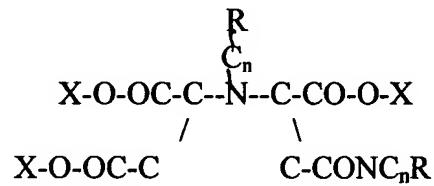


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is 1 to 10, R is a lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, wherein the synthesis of said compound comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and

(b) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compound.

18. (Amended) [The] A compound[s] [in claim 15] used for application to soils, seed, or plants, said compound comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

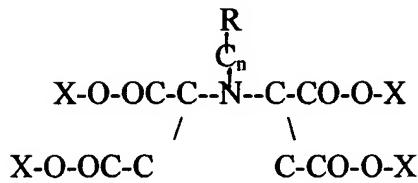


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is 1 to 10, R is a lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, wherein the synthesis of said compound comprises the steps of:

(c) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and

(d) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compound.

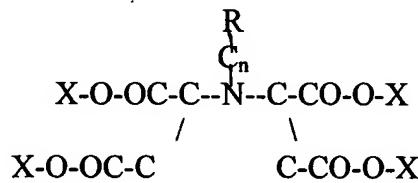
21. (Amended) [The compounds synthesized in claim 19 used as] A fertilizer additive[s] comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of electrons, wherein the synthesis of said fertilizer additive comprises the steps of:

adding maleic anhydride or malic acid to Me (OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinamino(:functional group).

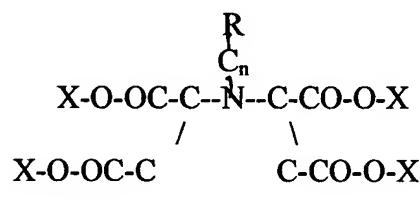
21. (Amended) [The compounds synthesized in claim 19 used as] A chelating agent[s] in a concentration[s] of  $1/10^a$  to 1 part, where a is less than 10, or, or  $1.0 \times 10^{-9}$ Molar to 3Molar, wherein said chelating agent comprises at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of

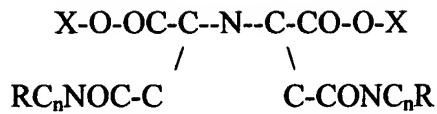
electrons, and wherein the synthesis of said chelating agent comprises the steps of : adding maleic anhydride or malic acid to Me (OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinamino(:functional group).

22. (Amended) [The] A compound[s] [in claim 19] used for application to soils, seed, or plants comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of electrons, wherein the synthesis of said compound comprises the steps of: adding maleic anhydride or malic acid to Me (OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinamino(:functional group).

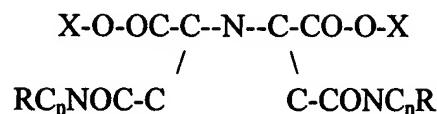
24. (Amended) [The compounds synthesized in claim 23 used as] A fertilizer additive[s] comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said fertilizer additive comprises the steps of:

- (a) adding acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide; and
- (b) adding to said N- polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide.

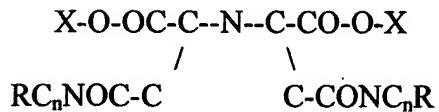
25. (Amended) [The compounds synthesized in claim 23 used as] A chelating agent[s} in a concentration[s] of 1/10<sup>a</sup> to 1 part, where a is less then 10, or 1.0 x 10<sup>-9</sup> Molar to 3 Molar, said chelating agent comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; and wherein the synthesis of said chelating agent comprises the steps of:

(a) adding acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide; and (b) adding to said N- polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide.

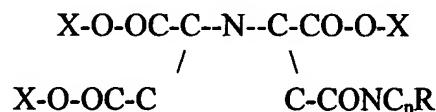
26. (Amended) A [The] compound[s] [in claim 23] used for application to soils, seed, or plants comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; and wherein the synthesis of said compound comprises the steps of : (a) adding acid anhydride or

lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide; and (b) adding to said N- polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide.

28. (Amended) [The compounds synthesized in claim 27 used as] A fertilizer additive[s] comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

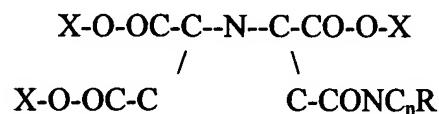


where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said fertilizer additive comprises the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;
- (b) adding to said N- polyfunctional acid common name amide, water, ammonia + maleic anhydride or maleic acid (salt) and allowing same to react to form said fertilizer additive.

29. (Amended) [The compounds synthesized in claim 27 used as] A chelating agent[s] in a concentration[s] of  $1/10^a$  to 1part, where a is less then 10, or  $1.0 \times 10^{-9}$  Molar to 3 Molar,

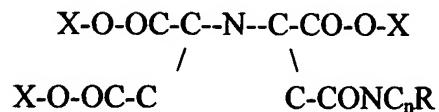
said chelating agent comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said chelating agent comprises the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;
- (b) adding to said N- polyfunctional acid common name amide, water, ammonia + maleic anhydride or maleic acid (salt) and allowing same to react to form said chelating agent.

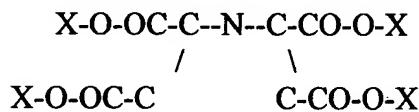
30. (Amended) [The compounds in claim 27] A compound used for application to soils, seed, or plants, said compound comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said compound comprises the steps of:

- (a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;
- (b) adding to said N- polyfunctional acid common name amide, water, ammonia + maleic anhydride or maleic acid (salt) and allowing same to react to form said compound.

32. (Amended) [The iminodisuccinic acid of claim 31 used as a] A fertilizer additive comprising iminodisuccinic acid having the following formula



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salt.

34. (Amended) [The] An iminodisuccinic acid [of claim 31] used for application to soils, seed, or plants having the following formula